



United States
Department of
Agriculture



Natural Resources
Conservation
Service

Oregon Basin Outlook Report

March 1, 2011



The above photo was taken by field office staff Scott Robbins and Tom Snyder during the March 1 snow survey on Mary's Peak near Corvallis, Oregon. Since last month, the Mary's Peak Revised snow course has gained 34" of snow depth and 6.4" of water content; a significant change from having no snow just one month ago. A recent barrage of Pacific low pressure systems has brought increased snowfall to the Oregon mountains, increasing snow water content across the state.

Contents

General Outlook	1
Owyhee and Malheur Basins	3
Burnt, Powder, Grand Ronde, and Imnaha Basins	5
Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins.....	8
Upper John Day Basin.....	10
Upper Deschutes and Crooked Basins	12
Hood, Mile Creeks, and Lower Deschutes Basins	15
Lower Columbia Basin.....	17
Willamette Basin.....	19
Rogue and Umpqua Basins.....	24
Klamath Basin	27
Lake County and Goose Lake	29
Harney Basin.....	31
Recession Forecasts for Oregon	33
Summary of Snow Course Data	35
Basin Outlook Reports; How Forecasts Are Made	38
Interpreting Water Supply Forecasts.....	39

General Outlook

March 1, 2011

SUMMARY

A high pressure ridge settled over Oregon during the later part of January and first part of February. The ridge brought dry and pleasant spring weather to the state. During the middle of February, the ridge finally broke down, bringing colder temperatures along with snow and precipitation. Snowpacks that had languished during January and February were replenished by this series of storms. The March 1 snow surveys showed improved snow pack conditions over the deficits reported on February 1.

In many Oregon basins, water supply forecasts remain similar to last month's Basin Outlook Report. February snowpack gains did not directly translate to improved water supply forecasts in many cases.

SNOWPACK

A winter storm moved into the state during the last two weeks of February bringing new snow to most snow measurement sites in the state. The storm was concentrated in northwest Oregon and southwest Washington along the Cascade crest. Snow water content gained appreciably at snow measurement sites in the northern Oregon Cascades. As a result, there were modest improvements to some water supply forecasts in the region.

During an average year, Oregon SNOTEL sites have accumulated approximately 85 to 95 percent of their annual peak snow accumulation by March 1. This year on March 1, the snowpack in Oregon basins ranged from 80 percent of average in the Hood, Mile Creeks and Lower Deschutes basins, to 98 percent of average in the Owyhee and Malheur basins and Lake County. Snow measurements were collected at 81 SNOTEL sites, 48 snow courses and 28 aerial markers this month.

PRECIPITATION

During the first half of February, clear and dry conditions prevailed over most of the state. At mid month, a series of storms brought much needed precipitation to the region.

Precipitation for the month of February was below normal to well below normal throughout most of Oregon. February precipitation ranged from 65 percent of average in the Klamath basin to 93 percent of average in the Lower Columbia basin.

Since the beginning of the water year, total precipitation has been near to slightly above average as a result of a wet early season.

RESERVOIRS

The March 1 storage at 26 major Oregon reservoirs analyzed in this publication was 88 percent of average. A total of 1,861,900 acre feet of water were stored on March 1, representing 58 percent of useable capacity. Last year at this time, these same reservoirs stored 1,338,600 acre feet of water.

STREAMFLOW

Water supply forecasts remain similar to last month's Water Supply Outlook Report in many basins. February snowpack gains did not directly translate to improved water supply forecasts in many cases. Basin wide summer streamflow forecasts are summarized below.

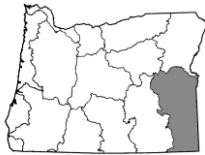
A summary of streamflow forecasts for Oregon follows:

STREAM	PERIOD	PERCENT OF AVERAGE
Owyhee Reservoir Inflow	Apr-Sep	105
Grande Ronde R at La Grande	Apr-Sep	99
Umatilla R at Pendleton	Apr-Sep	112
Deschutes R at Benham Falls	Apr-Sep	99
MF Willamette R bl NF	Apr-Sep	105
Rogue R at Raygold	Apr-Sep	97
Upper Klamath Lake Inflow	Apr-Sep	97
Silvies R nr Burns	Apr-Sept	111

Some of these forecasts assume that normal weather conditions will occur from now to the end of the forecast period.

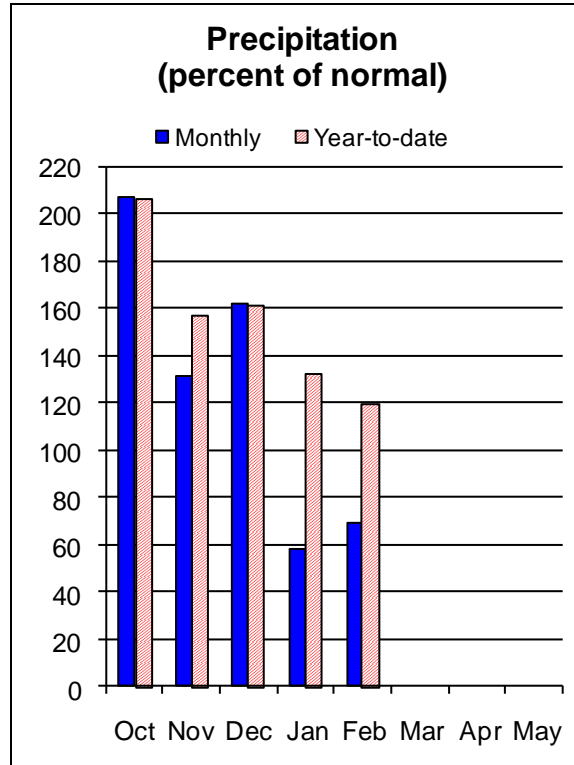
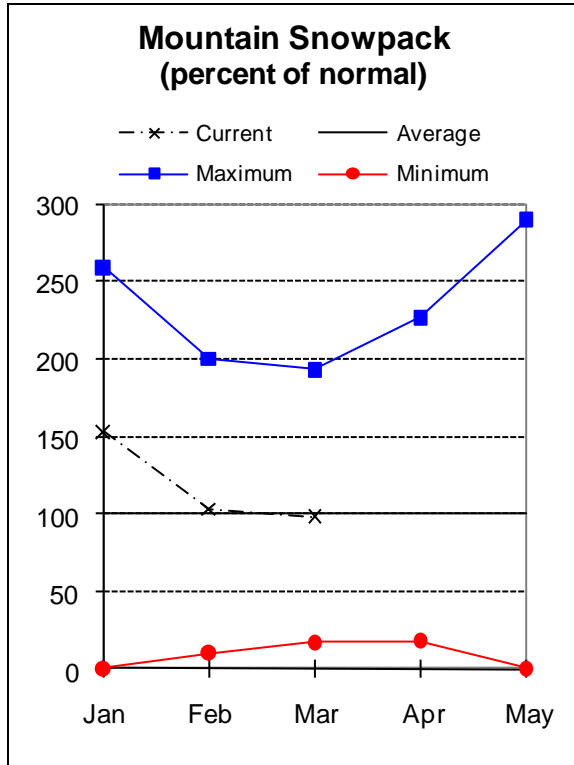
The forecasts in this bulletin are a result of coordinated activity between the Natural Resources Conservation Service and the National Weather Service as an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators. This report will be updated monthly, January through June.



Owyhee and Malheur Basins

March 1, 2011



Water Supply Outlook

February precipitation the Owyhee and Malheur basin was only 69 percent of average. This is the second month in a row with below average precipitation in the basin. Earlier in the water year, wetter conditions prevailed. As a result, cumulative precipitation since the beginning of the water year has been 119 percent of average.

On March 1, the snowpack in the Owyhee and Malheur basin was 98 percent of average, the highest in the state. Snow measurements were collected at 10 SNOTEL sites, 4 snow courses and 18 aerial markers in the basin this month.

March 1 storage at the four irrigation reservoirs in the Owyhee and Malheur basins was 80 percent of average and 52 percent of capacity.

The April through September streamflow forecasts in the Owyhee and Malheur basins range from 105 percent of average for Owyhee Reservoir Inflow to 111 percent of average for the Malheur River near Drewsey. Summer streamflow forecasts have declined somewhat from the February Basin Outlook Report. Water users in the Owyhee and Malheur basins can anticipate near to slightly above average streamflows for the summer ahead.

For more information contact your local Natural Resources Conservation Service Office:

Ontario - (541) 889-7637

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

OWYHEE AND MALHEUR BASINS
Streamflow Forecasts - March 1, 2011

		<<===== Drier =====		Future Conditions		===== Wetter =====>>			
Forecast Point	Forecast Period	Chance Of Exceeding *							30-Yr Avg. (1000AF)
		90%	70%	50%		30%	10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		
Malheur R nr Drewsey	MAR-JUL	71	100	122	111	147	187	110	
	APR-SEP	47	68	84	111	102	132	76	
NF Malheur R at Beulah (2)	MAR-JUL	60	78	92	114	107	131	81	
Owyhee R bl Owyhee Dam (2)	MAR-JUL	410	540	645	105	755	935	615	
	MAR-SEP	440	575	675	105	785	960	645	
	APR-SEP	255	365	450	105	545	700	430	
Owyhee R nr Rome	MAR-JUL	390	520	610	105	700	830	580	
	MAR-SEP	405	540	630	105	720	855	600	
	APR-SEP	210	335	420	105	505	630	400	

OWYHEE AND MALHEUR BASINS
Reservoir Storage (1000 AF) - End of February

OWYHEE AND MALHEUR BASINS
Watershed Snowpack Analysis - March 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEULAH RES	60.0	32.4	17.4	35.4	Owyhee	19	98	100
BULLY CREEK	30.0	14.5	14.9	17.5	Upper Malheur	8	81	97
OWYHEE	715.0	403.8	213.0	489.1	Jordan Creek	3	100	98
WARMSPRINGS	191.0	66.3	24.2	102.7	Bully Creek	3	60	100
					Willow Creek	4	67	109

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 base period.

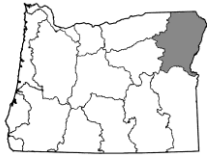
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(2) - The value is natural volume - actual volume may be affected by upstream water management.

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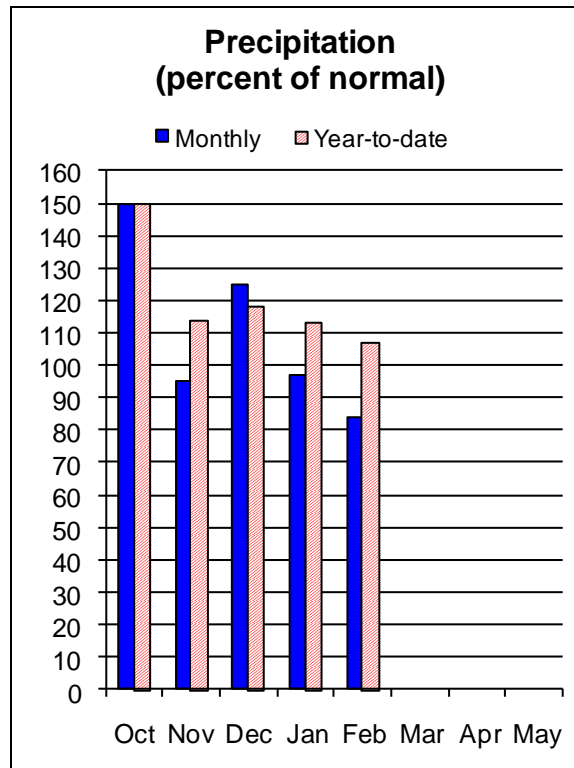
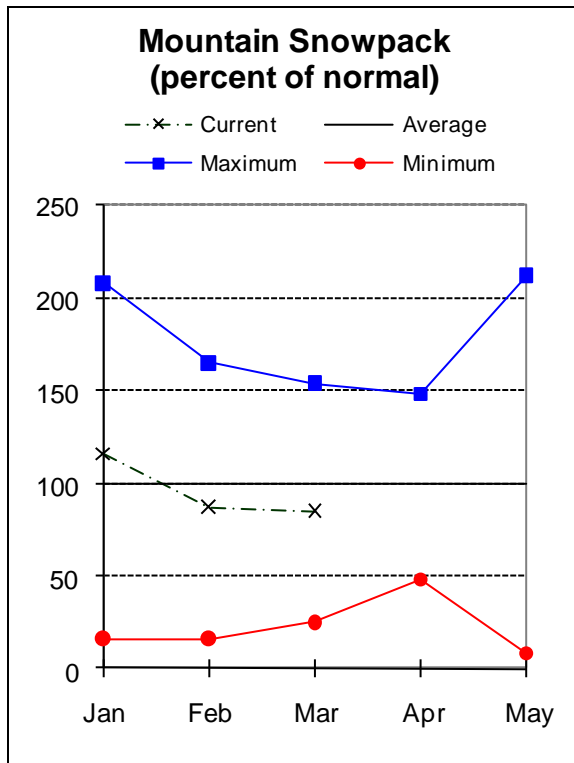
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Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Burnt, Powder, Grand Ronde, and Imnaha Basins

March 1, 2011



Water Supply Outlook

A drier than normal February did not improve the snowpack in the Burnt, Powder, Pine, Grande Ronde, and Imnaha basins. On March 1, the snowpack in the basin measured 85 percent of average, a small decline from last month. Snow measurements were gathered at 16 SNOTEL sites, 7 snow courses and 1 aerial marker in the basin. Precipitation for the month of February was 84 percent of average in the basin.

As of March 1, total water year precipitation was 107 percent of average. March 1 storage at Phillips Lake, Thief Valley and Unity reservoirs was 102 percent of average and 67 percent of capacity.

Most forecasts for points within the basin remain unchanged from the February 1 Outlook Report. As of March 1, the April through September streamflow forecasts range from 93 percent of average for Pine Creek near Oxbow to 108 percent of average for the Burnt River near Hereford. Elsewhere in the basin, the Grande Ronde River at LaGrande is forecast to be 99 percent of average for the April through September period. At this point in the season, basin water users can expect average streamflows for the summer of 2011.

For more information contact your local Natural Resources Conservation Service Office:
Enterprise- (541) 426-4588; Baker City - (541) 523-7121; LaGrande - (541) 963-4178
Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS
Streamflow Forecasts - March 1, 2011

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)	
		Chance Of Exceeding *							
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Bear Ck nr Wallowa	APR-SEP	46	55	60	92	65	74	65	
Burnt nr Hereford (2)	MAR-JUL	39	49	55	108	61	71	51	
	APR-SEP	25	35	42	108	49	59	39	
Catherine Ck nr Union	APR-JUL	47	57	63	102	69	79	62	
	APR-SEP	51	60	67	102	74	83	66	
Deer Ck nr Sumpter	MAR-JUL	11.9	15.1	17.3	95	19.5	23	18.2	
Grande Ronde R at La Grande	MAR-JUL	165	210	240	97	270	315	247	
	APR-SEP	115	158	187	100	215	260	188	
Grande Ronde R at Troy (1)	MAR-JUL	1170	1470	1600	101	1730	2030	1580	
	APR-SEP	945	1240	1380	101	1520	1810	1370	
Imnaha R at Imnaha	APR-JUL	195	245	275	102	305	355	270	
	APR-SEP	215	265	300	102	335	385	295	
Lostine R nr Lostine	APR-JUL	100	109	115	103	121	130	112	
	APR-SEP	109	118	125	103	132	141	121	
Pine Ck nr Oxbow	MAR-JUL	110	149	175	93	200	240	188	
	APR-JUL	84	115	137	93	159	190	148	
	APR-SEP	88	121	143	93	165	198	154	
Powder R nr Sumpter	MAR-JUL	52	63	71	101	79	90	70	
	APR-JUL	40	51	59	102	67	78	58	
	APR-SEP	40	52	60	102	68	80	59	
Wolf Ck Reservoir Inflow (2)	MAR-JUN	11.7	15.3	17.8	110	20	24	16.2	

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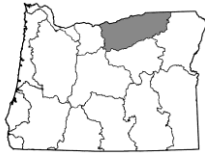
BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS Reservoir Storage (1000 AF) - End of February					BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS Watershed Snowpack Analysis - March 1, 2011			
Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
PHILLIPS LAKE	73.5	49.2	40.7	43.8	Upper Grande Ronde	9	123	92
THIEF VALLEY	17.4	13.8	13.7	17.3	Wallowa	4	112	86
UNITY	25.2	15.1	10.1	15.8	Imnaha	4	121	79
WALLOWA LAKE	37.5	15.4	13.0	18.8	Powder	11	111	86
WOLF CREEK	10.4	11.1	3.8	3.8	Burnt	5	88	95

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

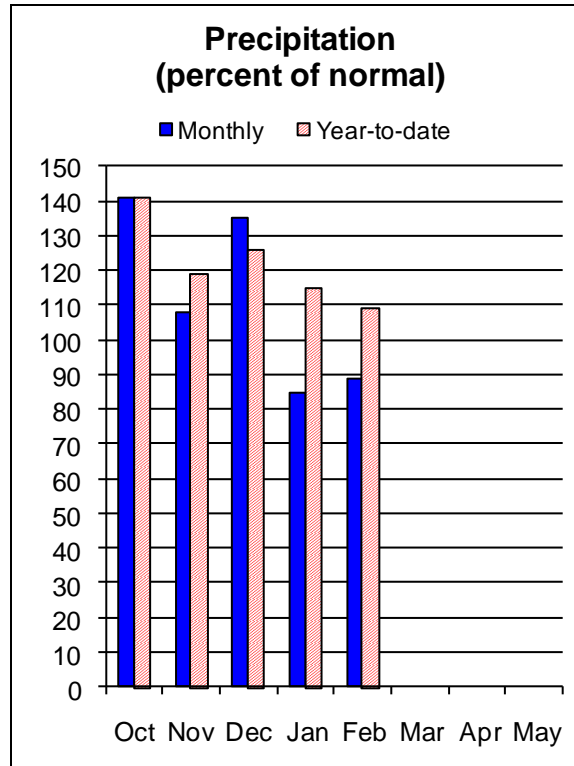
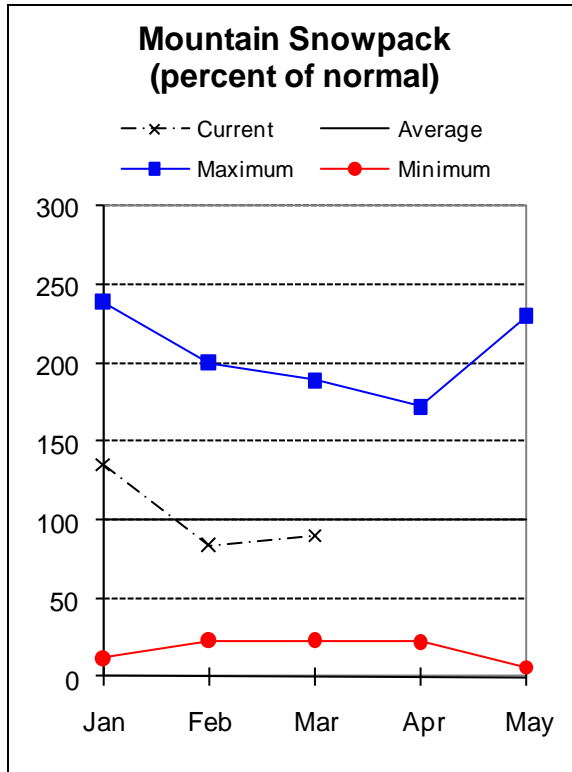
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Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins

March 1, 2011



Water Supply Outlook

On March 1, the snowpack in the Umatilla, Walla Walla, Willow, Rock and Lower John Day basin was 90 percent of average, a small but welcome improvement from the February 1 survey. Snow measurements for March 1 were collected at 7 SNOTEL sites and 2 snow courses. As of March 1, total water year precipitation for the basin was 109 percent of average. February precipitation measured 89 percent of average.

March 1 storage at Cold Springs and McKay reservoirs was 100 percent of average and 60 percent of capacity. The April through September streamflow forecasts range from 103 percent of average for the South Fork Walla Walla River near Milton-Freewater to 125 percent of average for Butter Creek near Pine City. Elsewhere in the basin, the Umatilla River near Pendleton is forecast to be 112 percent of average for the April through September period. At this point in the season, water users in the Umatilla, Walla Walla, Willow, Rock and Lower John Day basins can expect near to above average streamflow conditions for the summer of 2011.

For more information contact your local Natural Resources Conservation Service Office:
 Pendleton - (541) 278-8049; Heppner - (541) 676-5021; Condon - (541) 384-2671
 Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS
Streamflow Forecasts - March 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Butter Ck nr Pine City	MAR-JUL	12.3	16.2	18.8	125	21	25	15.0
	APR-SEP	7.8	10.7	12.7	125	14.7	17.6	10.2
McKay Ck nr Pilot Rock	APR-SEP	13.7	25	33	122	41	52	27
Rhea Ck nr Heppner	MAR-JUL	8.3	11.7	14.0	130	16.3	19.7	10.8
Umatilla R ab Meacham Ck nr Gibbon	APR-JUL	58	71	80	110	89	102	73
	MAR-SEP	91	106	116	109	126	141	106
	APR-SEP	64	77	86	109	95	108	79
Umatilla R at Pendleton	APR-JUL	116	147	167	112	187	220	149
	MAR-SEP	205	235	260	113	285	315	230
	APR-SEP	123	153	174	112	195	225	155
SF Walla Walla R nr Milton-Freewater	APR-JUL	46	52	56	104	60	66	54
	MAR-SEP	70	78	83	103	88	96	81
	APR-SEP	58	64	69	103	74	80	67
Willow Ck ab Willow Ck Lake nr Heppn	MAR-JUL	8.4	11.6	13.8	124	16.0	19.2	11.1
	APR-JUL	4.8	7.4	9.2	124	11.0	13.6	7.4

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS
Reservoir Storage (1000 AF) - End of February

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS
Watershed Snowpack Analysis - March 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
COLD SPRINGS	50.0	22.4	14.6	29.5	Walla Walla	4	132	87
MCKAY	73.8	51.4	19.0	44.6	Umatilla	7	137	94
WILLOW CREEK	1.8	0.9	1.2	---	McKay Creek	4	152	95

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 base period.

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For more information contact your local Natural Resources Conservation Service Office:

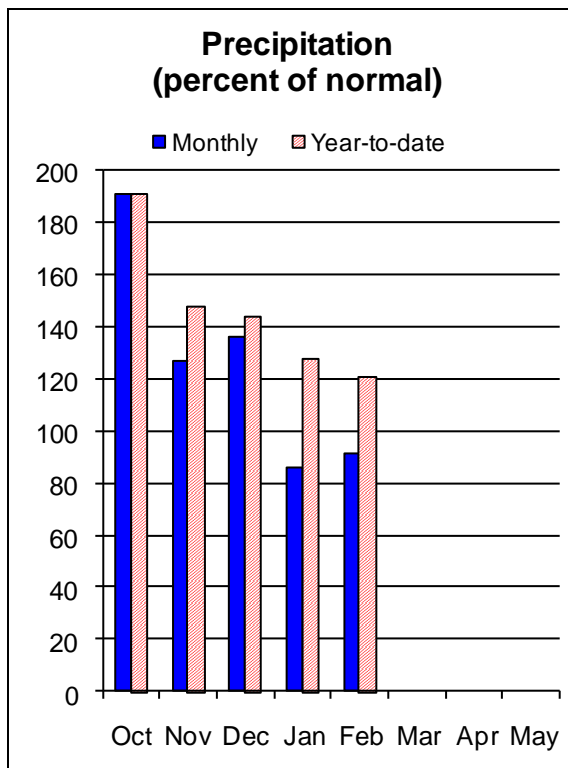
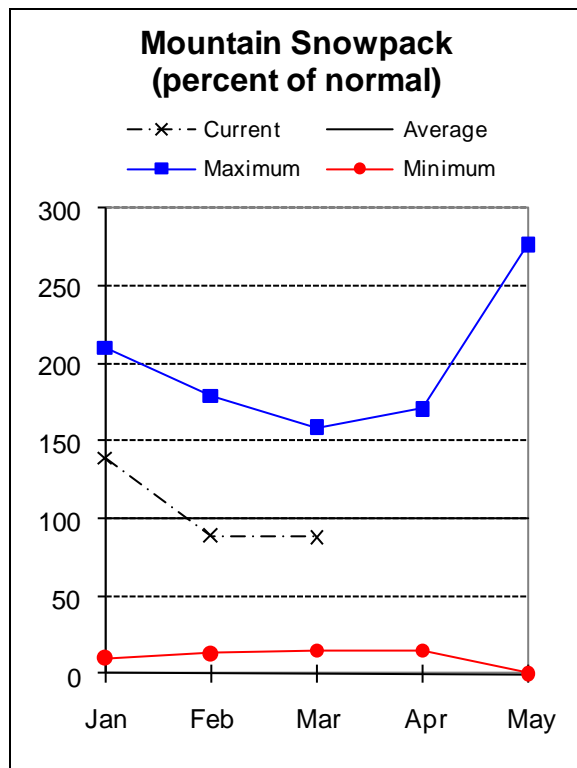
Pendleton - (541) 278-8049; Heppner - (541) 676-5021; Condon - (541) 384-2671

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Upper John Day Basin

March 1, 2011



Water Supply Outlook

Small gains were made in the snowpack of the Upper John Day basin during the month of February. On March 1, the snowpack in the Upper John Day was 88 percent of average as measured at 13 SNOTEL sites and 4 snow courses. February precipitation in the Upper John Day basin was 91 percent of average. Since the beginning of the water year, cumulative precipitation in the Upper John Day basin has been 121 percent of average, the highest percentage in the state.

The April through September streamflow forecasts range from 95 percent of average for Camas Creek near Ukiah to 111 percent of average for Mountain Creek near Mitchell. Elsewhere in the basin, the North Fork John Day at Monument is forecast to be 110 percent of average for the April through September period. Water users in the John Day basin can expect near to slightly above average streamflows for the summer of 2011.

For more information contact your local Natural Resources Conservation Service Office:
John Day - (541) 575-0135

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

UPPER JOHN DAY BASIN
Streamflow Forecasts - March 1, 2011

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	Chance Of Exceeding *						30-Yr Avg. (1000AF)
		90%	70%	50%		30%	10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
=====								
Camas Ck nr Ukiah	MAR-JUL	33	43	49	94	55	65	52
	APR-SEP	20	30	36	95	42	52	38
MF John Day R at Ritter	MAR-JUL	122	154	175	110	196	230	159
	APR-SEP	92	121	141	110	161	190	128
NF John Day R at Monument	MAR-JUL	630	775	870	110	965	1110	790
	APR-SEP	460	585	675	110	765	890	615
Mountain Ck nr Mitchell	MAR-JUL	3.9	5.6	6.8	112	8.0	9.7	6.1
	APR-SEP	2.6	4.1	5.1	111	6.1	7.6	4.6
Strawberry Ck nr Prairie City	MAR-JUL	5.4	7.0	8.0	108	9.0	10.6	7.4
	APR-SEP	5.7	7.3	8.4	108	9.5	11.1	7.8

UPPER JOHN DAY BASIN
Reservoir Storage (1000 AF) - End of February

UPPER JOHN DAY BASIN
Watershed Snowpack Analysis - March 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					North Fork John Day	7	109	79
					John Day above Kimberly	5	110	92

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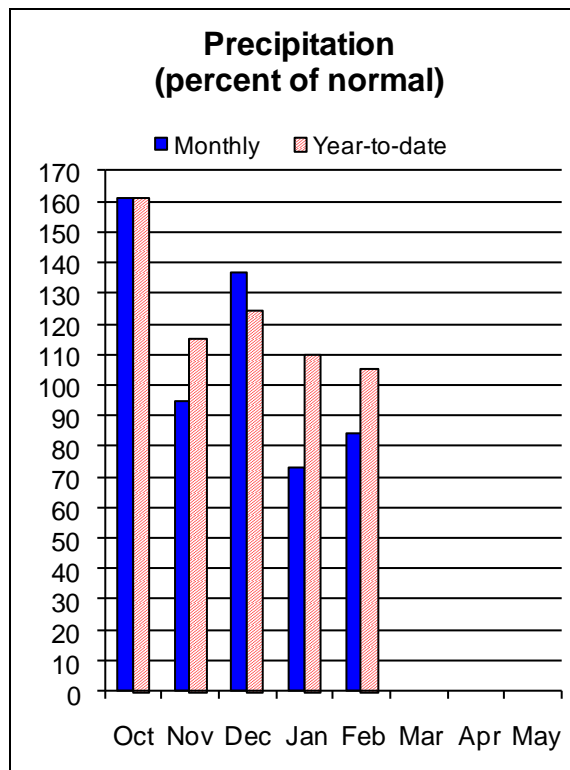
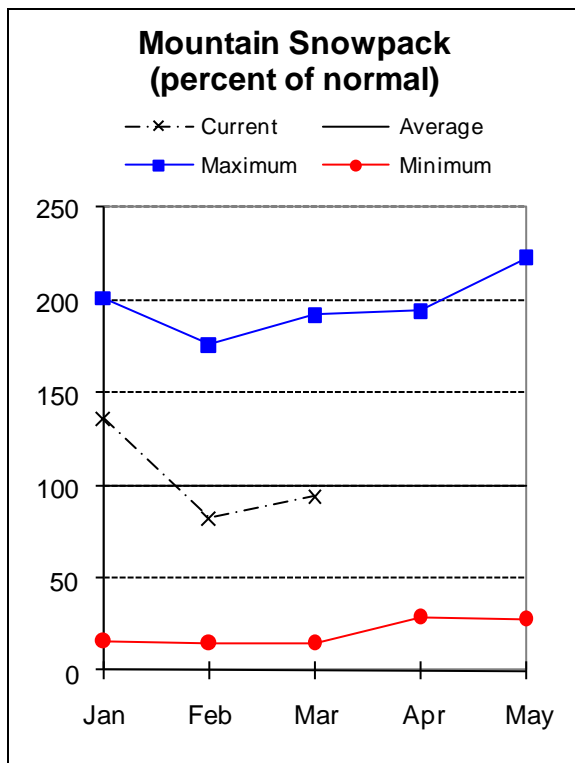
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John Day - (541) 575-0135
Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Upper Deschutes and Crooked Basins

March 1, 2011



Water Supply Outlook

As of March 1, the snowpack in the Upper Deschutes and Crooked basins measured 94 percent of average, a significant improvement from February 1. Snow measurements were recorded at 14 SNOTEL sites and 6 snow courses. February precipitation in the Upper Deschutes and Crooked River basins was only 84 percent of average. Since the beginning of the water year, precipitation in the basins has been 105 percent of average.

The March 1 storage at five irrigation reservoirs in the Upper Deschutes and Crooked River basins was 111 percent of average or 82 percent of capacity.

The April through September streamflow forecasts range from 96 percent of average for Whychus Creek near Sisters to 109 percent of average for Ochoco Reservoir Inflow. Elsewhere in the basin, Prineville Reservoir Inflow is forecast to be 105 percent of average for the same period. Both the Ochoco and Prineville reservoir inflow forecasts have declined since last month, yet remain above average. Water users in the Upper Deschutes and Crooked basins can anticipate near to slightly above average streamflow conditions for the summer ahead.

For more information contact your local Natural Resources Conservation Service Office:
Redmond (541) 923-4358

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

UPPER DESCHUTES AND CROOKED BASINS
Streamflow Forecasts - March 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)		30% (1000AF)	10% (1000AF)
Crane Prairie Reservoir Inflow (2)	MAR-JUL	55	64	71	104	78	87	68
	APR-JUL	49	57	62	105	67	75	59
	MAR-SEP	88	99	107	105	115	126	102
	APR-SEP	81	91	98	105	105	115	93
Crescent Ck nr Crescent (2)	MAR-JUL	12.5	17.6	21	105	24	30	20
	APR-JUL	10.8	15.1	18.1	105	21	25	17.2
	MAR-SEP	16.2	21	25	104	29	34	24
	APR-SEP	14.6	19.0	22	105	25	29	21
Deschutes R at Benham Falls nr Bend	MAR-JUL	385	410	425	99	440	465	430
	APR-JUL	315	335	345	99	355	375	350
	MAR-SEP	550	580	600	99	620	650	605
	APR-SEP	480	505	520	99	535	560	525
Deschutes R bl Snow Ck nr La Pine	MAR-JUL	27	34	39	100	44	51	39
	APR-JUL	23	29	33	100	37	43	33
	MAR-SEP	51	59	65	100	71	79	65
	APR-SEP	47	54	59	100	64	71	59
Little Deschutes R nr La Pine (2)	MAR-JUL	70	83	91	105	99	112	87
	APR-JUL	59	68	75	106	82	91	71
	MAR-SEP	79	92	101	105	110	123	96
	APR-SEP	64	76	84	105	92	104	80
Ochoco Reservoir Inflow (2)	MAR-JUL	25	33	38	109	43	51	35
	APR-JUL	12.9	19.5	24	109	28	35	22
	MAR-SEP	25	33	38	109	43	51	35
	APR-SEP	12.9	19.5	24	109	28	35	22
Prineville Reservoir Inflow (2)	MAR-JUL	102	156	193	105	230	285	184
	APR-JUL	49	87	113	105	139	177	108
	MAR-SEP	102	157	194	105	230	285	185
	APR-SEP	48	87	114	105	141	180	109

For more information contact your local Natural Resources Conservation Service Office:
Redmond (541) 923-4358
Or visit: <http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl>

UPPER DESCHUTES AND CROOKED BASINS
Streamflow Forecasts - March 1, 2011

=====								
Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
=====								
Whychus Ck nr Sisters	MAR-JUL	32	35	37	95	39	42	39
	APR-JUL	30	33	35	97	37	40	36
	MAR-SEP	42	46	48	96	50	54	50
	APR-SEP	42	45	47	96	49	52	49

UPPER DESCHUTES AND CROOKED BASINS
Reservoir Storage (1000 AF) - End of February

UPPER DESCHUTES AND CROOKED BASINS
Watershed Snowpack Analysis - March 1, 2011

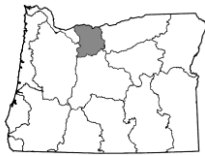
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CRANE PRAIRIE	55.3	41.7	40.8	41.9	Crooked	4	101	98
CRESCENT LAKE	86.9	70.2	67.0	52.3	Little Deschutes	4	156	111
OCHOCO	47.5	35.4	22.7	25.8	Deschutes above Wickiup R	4	189	113
PRINEVILLE	153.0	108.3	102.6	102.7	Tumalo and Squaw Creeks	5	141	90
WICKIUP	200.0	187.0	193.9	176.0				

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

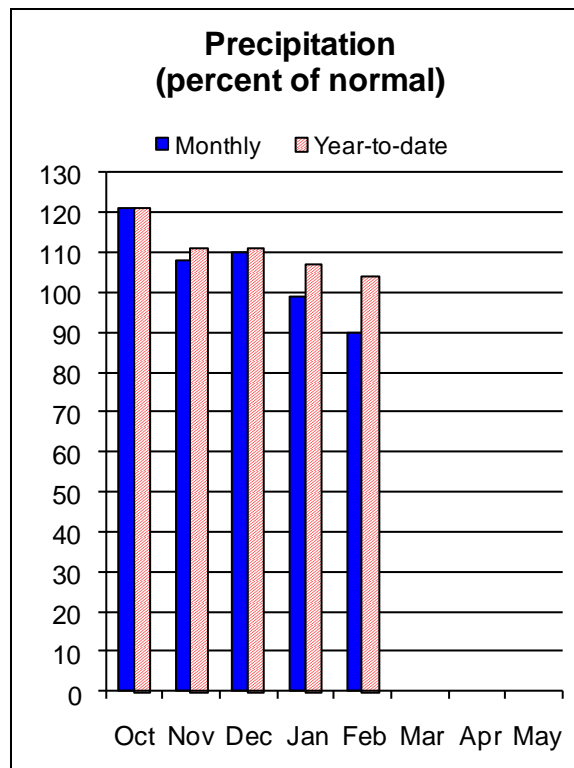
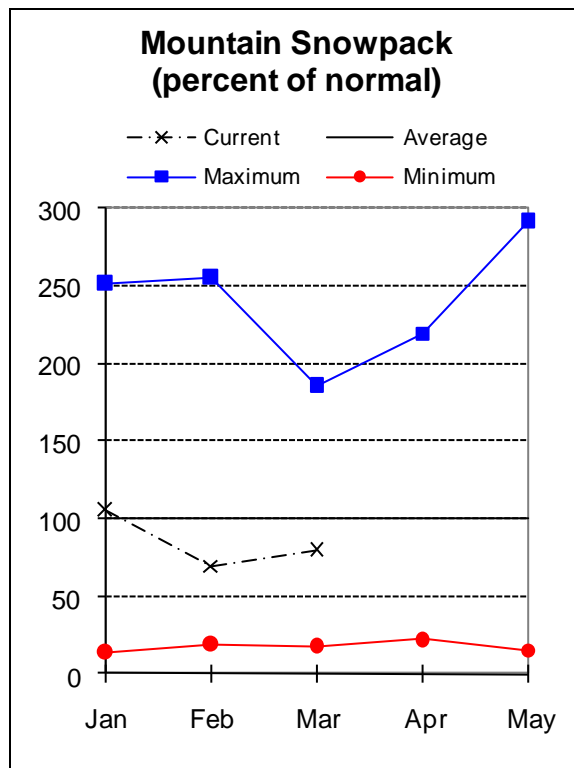
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

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Hood, Mile Creeks, and Lower Deschutes Basins

March 1, 2011



Water Supply Outlook

February precipitation in the Hood, Mile Creeks and Lower Deschutes basins was 90 percent of average. February precipitation fell mostly as snow at the mid and upper elevations. On March 1, the snowpack in the Hood, Mile Creeks and Lower Deschutes basins was 80 percent of average, a several point improvement over the February 1 percentage. Snow measurements were collected at 8 SNOTEL sites and 3 snow courses in the basin this month. As of March 1, total precipitation for water year 2011 has been 104 percent of average.

The April through September streamflow for Hood River at Tucker Bridge is forecast to be 96 percent of average. For the April through September period, the West Fork Hood River near Dee is forecast to be 95 percent of average.

At this point in the season, water users in the Hood, Mile Creeks and Lower Deschutes basin can expect near normal streamflows during the summer of 2011.

For more information contact your local Natural Resources Conservation Service Office:
The Dalles (541) 296-6178

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS
Streamflow Forecasts - March 1, 2011

		<<===== Drier =====		Future Conditions		===== Wetter =====>>			
Forecast Point	Forecast Period	Chance Of Exceeding *							
		90%	70%	50%		30%	10%	30-Yr Avg.	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)
WF Hood River nr Dee	APR-JUL	78	100	115	95	130	152	121	
Hood R At Tucker Bridge	APR-JUL	166	198	220	97	240	275	228	
	APR-SEP	200	235	260	96	285	320	271	

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS
Reservoir Storage (1000 AF) - End of February

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS
Watershed Snowpack Analysis - March 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CLEAR LAKE (WASCO)	11.9	4.6	3.6	4.3	Hood River	7	133	82
					Mile Creeks	2	93	70
					White River	5	120	75

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

For more information contact your local Natural Resources Conservation Service Office:

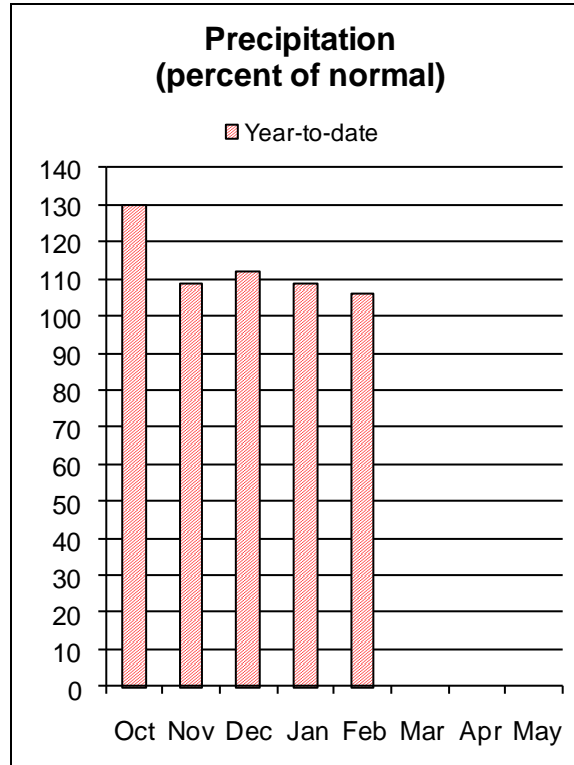
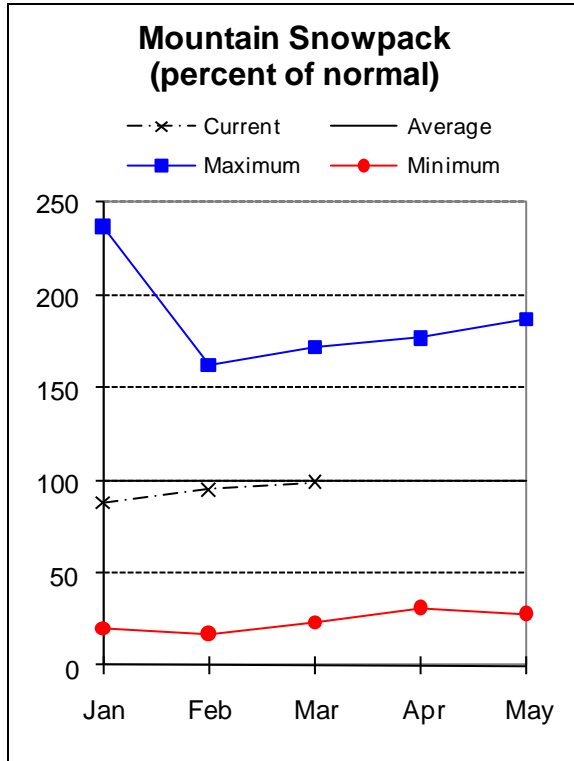
The Dalles (541) 296-6178

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Lower Columbia Basin

March 1, 2011



Water Supply Outlook

Since the beginning of the water year, precipitation in the Columbia basin above The Dalles has been 106 percent of average. Locally, February precipitation in the Sandy basin was 93 percent of average. For the Columbia basin above The Dalles, the March 1 snowpack was 99 percent of average, a small gain from last month.

At this point in the season, the April through September streamflow forecast for the Columbia at The Dalles is 99 percent of average. For the Sandy near Marmot, the April through September streamflow forecast is also 99 percent of average.

For more information contact your local Natural Resources Conservation Service Office:
Oregon City - (503) 656-3499

Or visit: <http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl>

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LOWER COLUMBIA BASIN
Streamflow Forecasts - March 1, 2011

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						
		Chance Of Exceeding *						
		90%	70%	50%		30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Columbia R at The Dalles (2)	APR-JUL	72100	79100	83900	99	88700	95700	84600
	APR-SEP	84000	92200	97800	99	103000	112000	98600
Sandy R nr Marmot	APR-JUL	240	280	310	99	340	380	313
	APR-SEP	285	330	360	99	390	435	363

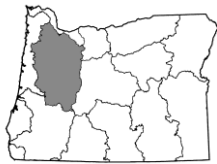
LOWER COLUMBIA BASIN Reservoir Storage (1000 AF) - End of February					LOWER COLUMBIA BASIN Watershed Snowpack Analysis - March 1, 2011			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Sandy	8	181	87

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

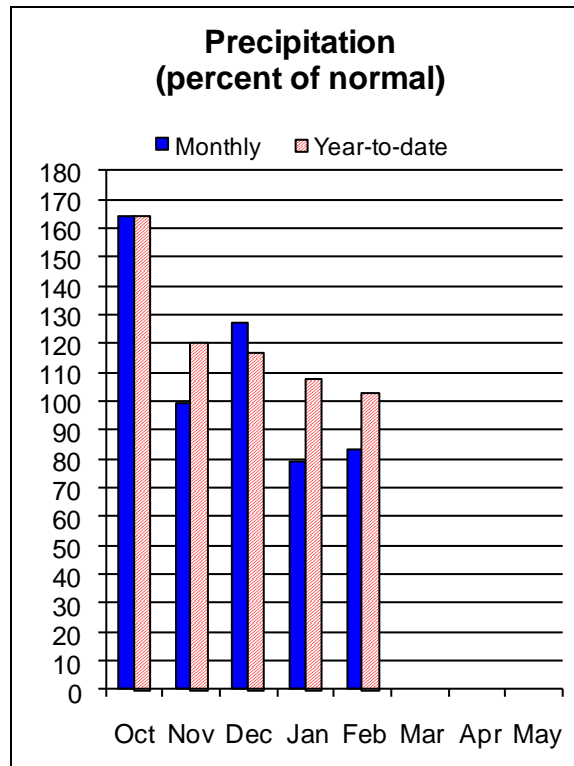
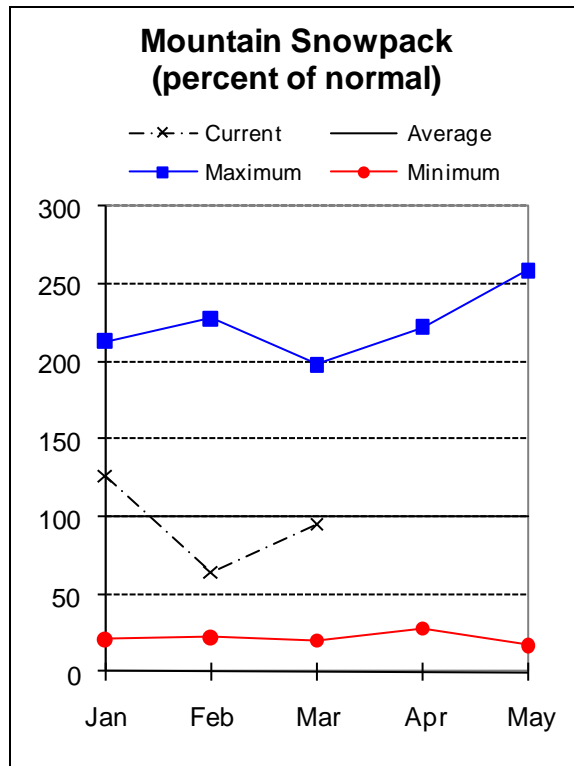
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 (2) - The value is natural volume - actual volume may be affected by upstream water management.

For more information contact your local Natural Resources Conservation Service Office:
 Oregon City - (503) 656-3499
 Or visit: <http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl>



Willamette Basin

March 1, 2011



Water Supply Outlook

The Willamette basin snowpack has rebounded significantly since the February 1 report. As March 1, the snowpack the basin was 95 percent of average, up from 64 percent of average on February 1. March 1 snow measurements were collected at 20 SNOTEL sites and 3 snow courses. February precipitation was 83 percent of average. Since the beginning of the water year, precipitation in the Willamette basin has been 103 percent of average.

The April through September streamflow forecasts for the Willamette basin range from 106 percent of average for Dorena Lake Inflow to of 92 percent of average for Foster Lake Inflow. Elsewhere in the basin, the McKenzie near Vida is forecast to be 102 percent of average and the Willamette River at Salem is forecast to be 98 percent of average for the April through September period. At this point in the season, water users in the Willamette basin can anticipate near average summer streamflow conditions.

The March 1 storage at Timothy Lake and Henry Hagg reservoirs in the Willamette basin was 103 percent of average and 87 percent of capacity.

For more information contact your local Natural Resources Conservation Service Office:
 Eugene - (541) 465-6436; Portland - (503) 231-2270; Tangent - (541) 967-5925; Oregon City - (503) 656-3499;
 Hillsboro - (503) 648-3174; McMinnville - (503) 472-1474
 Salem - (503) 399-5746; Dallas - (503) 623-5534
 Or visit: <http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl>

WILLAMETTE BASIN
Streamflow Forecasts - March 1, 2011

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)	
		Chance Of Exceeding *							
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Blue Lake Inflow (1,2)	MAR-MAY	65	99	115	102	131	165	113	
	APR-JUL	51	77	88	102	99	125	86	
	APR-SEP	52	77	88	102	99	124	86	
Clackamas R at Estacada	APR-JUL	465	550	610	95	670	755	640	
	APR-SEP	560	650	710	95	770	860	748	
Clackamas R ab Three Lynx (2)	APR-JUL	345	400	440	93	480	535	474	
	APR-SEP	420	480	520	93	560	620	562	
Cottage Grove Lake Inflow (1,2)	MAR-MAY	31	53	63	105	73	95	60	
	APR-JUL	13.3	34	43	106	52	73	41	
	APR-SEP	16.2	36	45	105	54	74	43	
Cougar Lake Inflow (1,2)	MAR-MAY	148	198	220	104	240	290	212	
	APR-JUL	154	193	210	103	225	265	204	
	APR-SEP	179	215	235	102	255	290	230	
Detroit Lake Inflow (1,2)	MAR-MAY	345	465	520	96	575	695	540	
	APR-JUL	340	455	505	96	555	670	528	
	APR-SEP	415	535	590	96	645	765	616	
Dorena Lake Inflow (1,2)	MAR-MAY	111	167	193	106	220	275	182	
	APR-JUL	61	115	139	106	163	215	131	
	APR-SEP	63	120	145	106	170	225	137	
Fall Creek Lake Inflow (1,2)	APR-JUL	56	92	109	103	126	162	106	
	APR-SEP	49	94	115	103	136	181	112	
Fern Ridge Lake Inflow (1,2)	MAR-MAY	49	86	103	96	120	157	107	
	APR-JUL	10.5	36	47	96	58	84	49	
	APR-SEP	10.9	36	48	96	60	85	50	

For more information contact your local Natural Resources Conservation Service Office:

Eugene - (541) 465-6436; Portland - (503) 231-2270; Tangent - (541) 967-5925; Oregon City - (503) 656-3499; Hillsboro - (503) 648-3174; McMinnville - (503) 472-1474

Salem - (503) 399-5746; Dallas - (503) 623-5534

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

WILLAMETTE BASIN
Streamflow Forecasts - March 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
=====								
Foster Lake Inflow (1,2)	MAR-MAY	465	535	565	92	595	665	613
	APR-JUL	370	425	450	92	475	530	490
	APR-SEP	405	460	485	92	510	565	527
Green Peter Lake Inflow (1,2)	MAR-MAY	230	335	385	92	435	540	417
	APR-JUL	177	260	300	92	340	425	327
	APR-SEP	200	285	325	92	365	450	354
Hills Creek Reservoir Inflow (1,2)	MAR-MAY	181	265	300	104	335	420	288
	APR-JUL	186	255	290	105	325	395	277
	APR-SEP	225	300	335	105	370	445	320
Little North Santiam R nr Mehama (1)	APR-JUL	69	110	128	96	146	187	133
	APR-SEP	79	119	137	96	155	195	143
Lookout Point Lake Inflow (1,2)	MAR-MAY	490	695	790	104	885	1090	759
	APR-JUL	480	670	755	104	840	1030	726
	APR-SEP	570	770	860	104	950	1150	828
MF Willamette R bl NF (1,2)	MAR-MAY	405	650	760	105	870	1120	725
	APR-JUL	420	635	735	105	835	1050	698
	APR-SEP	490	730	840	105	950	1190	798
McKenzie R bl Trail Bridge (2)	APR-JUL	215	240	255	96	270	295	266
	APR-SEP	345	370	390	97	410	435	404
McKenzie R nr Vida (1,2)	APR-JUL	775	930	1000	102	1070	1220	977
	APR-SEP	985	1150	1230	102	1310	1470	1201
Mohawk R nr Springfield	MAR-JUL	92	118	135	101	152	178	134
Oak Grove Fork Of Clackamas	APR-JUL	97	112	122	94	132	147	130
	APR-SEP	128	145	157	94	169	186	167

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WILLAMETTE BASIN
Streamflow Forecasts - March 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						
		Chance Of Exceeding *						
		90%	70%	50%		30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
North Santiam R at Mehama (1,2)	APR-JUL	515	650	710	97	770	905	732
	APR-SEP	610	745	810	97	875	1010	834
South Santiam R at Waterloo (2)	APR-JUL	360	470	540	98	610	720	549
	APR-SEP	395	505	575	98	645	755	587
Scoggins Ck nr Gaston (2)	MAR-JUL	15.7	21	25	96	29	34	26
Thomas Ck nr Scio	MAR-JUL	91	109	121	100	133	151	121
Willamette R at Salem (1,2)	MAR-MAY	3440	4710	5290	98	5870	7140	5401
	APR-JUL	2570	3730	4260	98	4790	5950	4347
	APR-SEP	3060	4200	4720	98	5240	6380	4804

WILLAMETTE BASIN
Reservoir Storage (1000 AF) - End of February

WILLAMETTE BASIN
Watershed Snowpack Analysis - March 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BLUE RIVER	85.5	16.5	22.2	31.9	Clackamas	5	196	70
COTTAGE GROVE	29.8	7.8	8.4	10.2	McKenzie	8	218	82
COUGAR	155.2	23.5	17.7	114.3	Row River	1	432	70
DETROIT	300.7	58.0	79.1	141.8	Santiam	6	352	78
DORENA	70.5	15.7	18.6	26.7	Middle Fork Willamette	7	199	103
FALL CREEK	115.5	24.8	23.1	40.5				

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WILLAMETTE BASIN Reservoir Storage (1000 AF) - End of February					WILLAMETTE BASIN Watershed Snowpack Analysis - March 1, 2011			
Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
FERN RIDGE	109.6	37.1	44.0	45.5				
FOSTER	29.7	3.1	8.9	9.6				
GREEN PETER	268.2	43.8	88.0	173.2				
HILLS CREEK	200.2	51.0	35.2	119.0				
LOOKOUT POINT	337.0	82.6	37.9	116.8				
TIMOTHY LAKE	61.7	54.0	54.2	51.5				
HENRY HAGG LAKE	53.0	45.8	46.9	45.4				

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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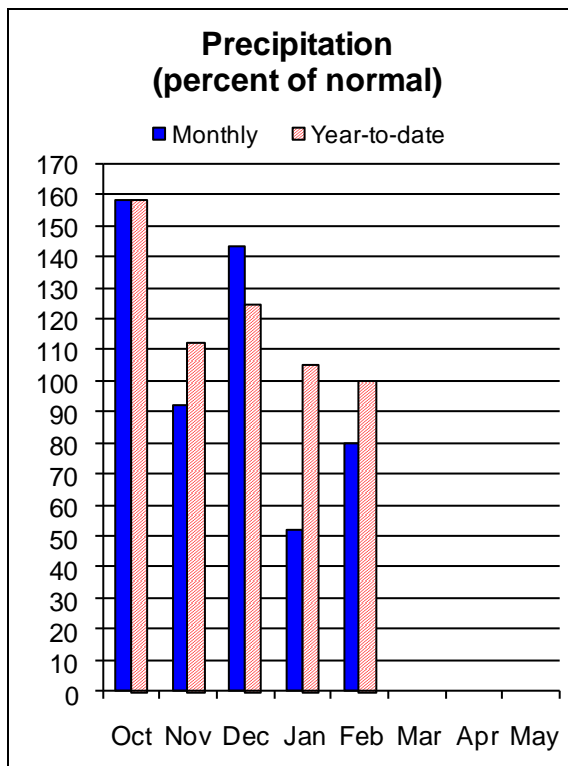
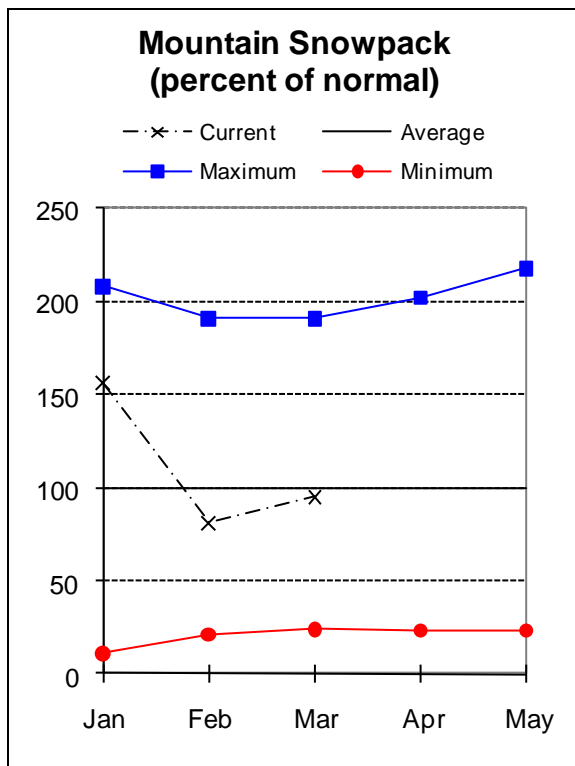
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 Salem - (503) 399-5746; Dallas - (503) 623-5534
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Rogue and Umpqua Basins

March 1, 2011



Water Supply Outlook

As of March 1, the snowpack in the Rogue and Umpqua basins was 95 percent of average, up from 81 percent of average on February 1. Snow measurements were collected at 12 SNOTEL sites and 20 snow courses. February precipitation was 80 percent of average. Since the beginning of the water year, precipitation in the Rogue and Umpqua basin has been 100 percent of average.

The March 1 storage at 5 irrigation reservoirs in the Rogue and Umpqua basins was 101 percent of average and 69 percent of capacity.

The April through September streamflow forecasts for the Rogue and Umpqua basin range from 90 percent of average for Applegate Lake inflow to 105 percent of average for South Umpqua near Brockway. Elsewhere in the basin, the Rogue River at Grants Pass is forecast to be 102 percent of average for the April through September period. Water users in the Rogue and Umpqua basins can expect slightly below to near average streamflows for the coming summer.

For more information contact your local Natural Resources Conservation Service Office:
 Roseburg - (541) 673-8316; Medford - (541) 776-4267
 Or visit: <http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl>

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ROGUE AND UMPQUA BASINS
Streamflow Forecasts - March 1, 2011

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		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	Chance Of Exceeding *						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
=====								
Applegate Lake Inflow (2)	MAR-JUL	80	118	144	90	170	210	160
	APR-JUL	59	84	101	90	118	143	112
	MAR-SEP	88	127	153	90	179	220	170
	APR-SEP	64	90	107	90	124	150	119
SF Big Butte Ck nr Butte Falls	APR-JUL	21	29	34	100	39	47	34
	APR-SEP	29	37	43	99	49	57	44
Cow Ck nr Azalea (2)	MAR-JUL	10.8	21	28	97	35	45	29
	APR-JUL	5.3	11.7	16.0	97	20	27	16.5
	APR-SEP	6.1	12.7	17.2	97	22	28	17.7
Hyatt Prairie Reservoir Inflow (2)	APR-JUL	0.9	2.8	4.1	85	5.4	7.3	4.8
Illinois R at Kerby	APR-JUL	71	135	179	100	225	285	179
	APR-SEP	78	142	186	100	230	295	186
NF Little Butte Ck nr Lakecreek (2)	APR-JUL	24	29	32	101	35	40	32
	APR-SEP	37	43	47	102	51	57	46
Lost Creek Lake Inflow (2)	MAR-JUL	520	605	665	97	725	810	685
	APR-JUL	405	470	515	97	560	625	530
	MAR-SEP	640	735	800	97	865	960	825
	APR-SEP	520	595	645	97	695	770	665
Rogue R at Raygold (2)	APR-JUL	475	615	710	97	805	945	730
	APR-SEP	620	765	865	97	965	1110	890
Rogue R at Grants Pass (2)	APR-JUL	485	645	755	102	865	1030	740
	APR-SEP	615	790	905	102	1020	1190	885
Sucker Ck bl Ltl Grayback Ck nr Holl	APR-JUL	29	43	53	102	63	77	52
	APR-SEP	33	47	57	102	67	81	56
North Umpqua R at Winchester	APR-JUL	540	695	795	100	895	1050	795
	APR-SEP	660	815	920	100	1030	1180	920

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Or visit: <http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl>

ROGUE AND UMPQUA BASINS
Streamflow Forecasts - March 1, 2011

		<<===== Drier ===== Future Conditions ===== Wetter =====>>							
Forecast Point	Forecast Period	Chance Of Exceeding *							30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
South Umpqua R nr Brockway	APR-JUL	210	335	420	105	505	630	400	
	APR-SEP	230	355	440	105	525	650	420	
South Umpqua R at Tiller	APR-JUL	113	164	199	103	235	285	193	
	APR-SEP	124	175	210	102	245	295	205	

ROGUE AND UMPQUA BASINS
Reservoir Storage (1000 AF) - End of February

ROGUE AND UMPQUA BASINS
Watershed Snowpack Analysis - March 1, 2011

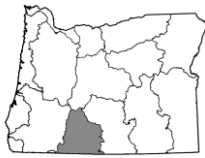
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
APPLEGATE	75.2	13.7	16.7	27.3	Applegate	6	117	92
EMIGRANT LAKE	39.0	28.4	22.4	28.0	Bear Creek	5	106	86
FISH LAKE	8.0	4.3	5.0	5.6	Little Butte Creek	6	143	83
FOURMILE LAKE	16.1	8.3	8.6	9.4	Illinois	3	190	116
HOWARD PRAIRIE	60.0	41.2	39.3	41.2	North Umpqua	9	269	95
HYATT PRAIRIE	16.1	14.1	12.5	11.0	Rogue River above Grants	21	139	93
LOST CREEK	315.0	70.0	56.0	218.2				

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

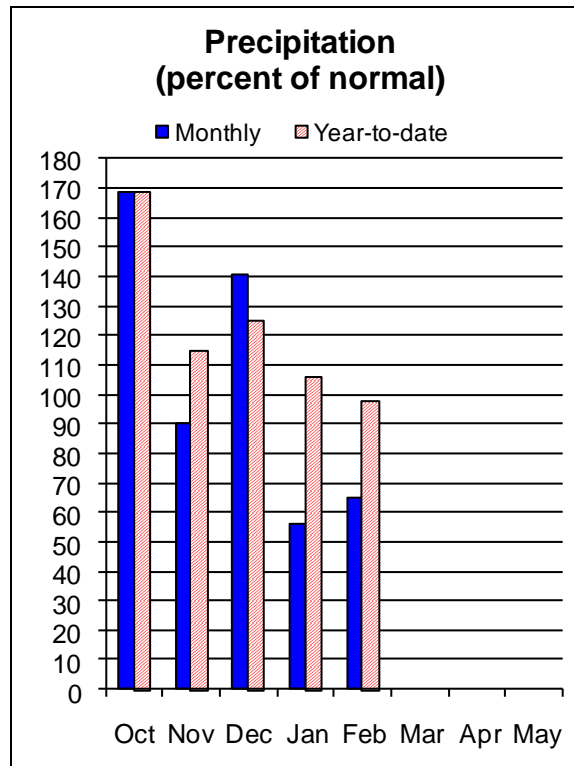
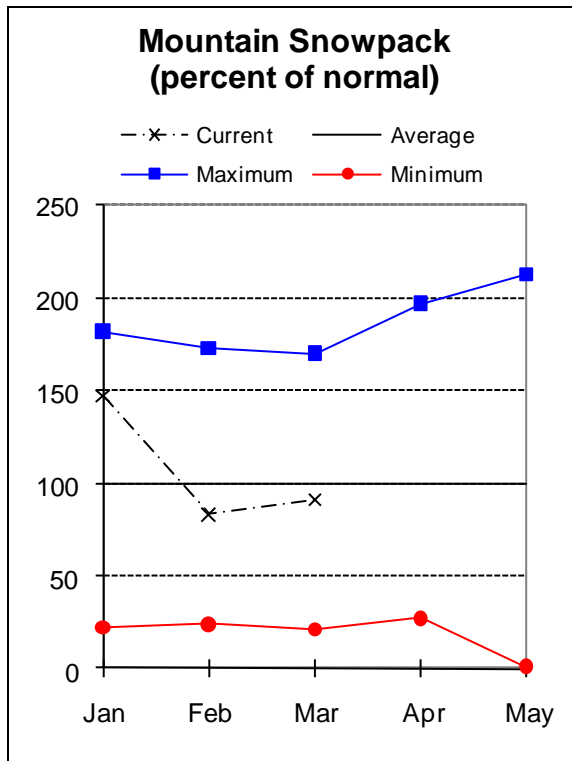
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

For more information contact your local Natural Resources Conservation Service Office:
Roseburg - (541) 673-8316; Medford - (541) 776-4267
Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Klamath Basin

March 1, 2011



Water Supply Outlook

As of March 1, the snowpack in the Klamath basin measured 91 percent of average, up from 83 percent of average on February 1. Snow measurements were collected at 15 SNOTEL sites, 5 snow courses and 7 aerial markers for the March 1 survey. Precipitation for the month of February was 65 percent of average - the lowest in the state. Since the beginning of the water year, precipitation in the Klamath basin has been 98 percent of average.

The March 1 storage at Upper Klamath Lake, Clear Lake (CA) and Gerber reservoirs was 77 percent of average or 46 percent of capacity.

Despite the improvement to the snowpack, there has been very little change in the Klamath basin streamflow forecasts since the February Water Supply Outlook Report. The April through September streamflow forecasts for the Klamath basin range from 97 percent of average for Upper Klamath Lake inflow to 106 percent of average for Clear Lake (CA) reservoir inflow. Water users in the Klamath basin can expect near to average streamflows for the summer of 2011.

For more information contact your local Natural Resources Conservation Service Office:
Klamath Falls - (541) 883-6932

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

KLAMATH BASIN
Streamflow Forecasts - March 1, 2011

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)	
		Chance Of Exceeding *							
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Clear Lake Inflow (2)	MAR-JUL	30	63	85	106	107	140	80	
	APR-SEP	22	39	51	106	63	80	48	
Gerber Reservoir Inflow (2)	MAR-JUL	17.0	30	39	105	48	61	37	
	APR-SEP	5.2	13.2	18.7	105	24	32	17.8	
Sprague R nr Chiloquin	MAR-JUL	190	245	280	102	315	370	275	
	MAR-SEP	215	270	310	102	350	405	305	
	APR-SEP	149	191	235	102	250	290	230	
Upper Klamath Lake Inflow (1,2)	MAR-JUL	405	540	605	97	670	805	625	
	MAR-SEP	445	590	695	97	730	875	720	
	APR-SEP	350	455	500	97	545	650	515	
Williamson R bl Sprague R nr Chiloqu	MAR-JUL	315	380	425	97	470	535	440	
	MAR-SEP	375	445	490	97	535	605	505	
	APR-SEP	285	340	375	97	410	465	385	

KLAMATH BASIN
Reservoir Storage (1000 AF) - End of February

KLAMATH BASIN
Watershed Snowpack Analysis - March 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CLEAR LAKE (CALIF)	513.3	79.9	65.2	224.2	Lost	3	110	101
GERBER	94.3	29.3	29.3	54.5	Sprague	8	111	93
UPPER KLAMATH LAKE	523.7	414.2	252.2	402.6	Upper Klamath Lake	7	124	88
					Williamson River	5	123	97

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

For more information contact your local Natural Resources Conservation Service Office:

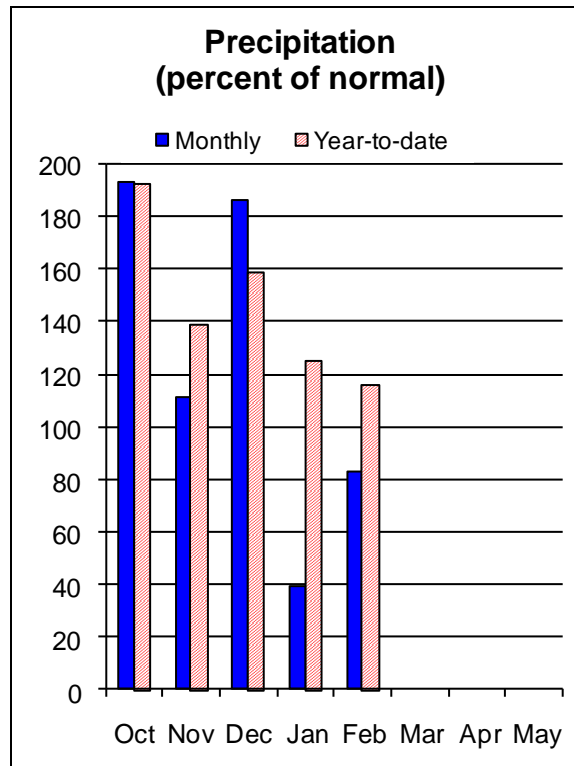
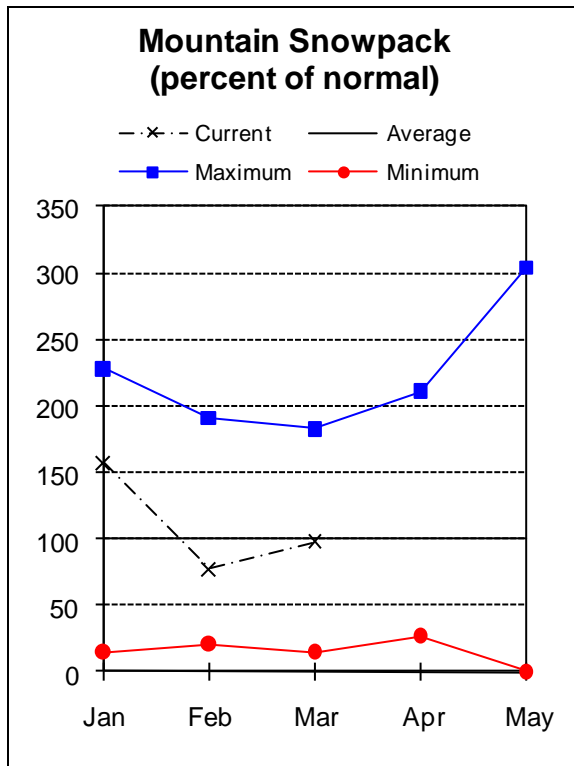
Klamath Falls - (541) 883-6932

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Lake County and Goose Lake

March 1, 2011



Water Supply Outlook

Snow surveyors in Lake County and Goose Lake basin observed a return to winter conditions on the March 1 survey. The March 1 snowpack in Lake County and Goose Lake basin was 98 percent of average, up from 77 percent of average on February 1. Snow measurements were collected for the March 1 survey at 9 SNOTEL sites, 8 aerial markers and 1 snow course. February precipitation was 83 percent of average. Since the beginning of the water year, precipitation has been 116 percent of average.

March 1 storage at Cottonwood and Drews reservoirs was 75 percent of average and 43 percent of capacity.

There have been some changes to the streamflow forecasts in Lake County and Goose Lake basin since the February Water Supply Outlook Report. As of March 1, the April through September forecasts range from 97 percent of average for the Chewaucan River near Paisley to 121 percent of average for Twentymile Creek near Adel. At this point in the season, water users in the Lake County and Goose Lake basins may anticipate near to above average water supplies during the summer of 2011.

For more information contact your local Natural Resources Conservation Service Office:
Lakeview - (541) 947-2202

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

LAKE COUNTY AND GOOSE LAKE BASINS
Streamflow Forecasts - March 1, 2011

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)	
		Chance Of Exceeding *							
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Chewaucan R nr Paisley	MAR-JUL	60	76	87	98	98	114	89	
	APR-SEP	52	66	76	97	86	100	78	
Deep Ck ab Adel	MAR-JUL	58	75	87	104	99	116	84	
	APR-SEP	47	62	72	104	82	97	69	
Honey Ck nr Plush	MAR-JUL	14.1	18.8	22	110	25	30	20	
	APR-SEP	10.5	15.2	18.3	110	21	26	16.6	
Silver Ck nr Silver Lake (2)	MAR-JUL	8.2	12.0	14.6	100	17.2	21	14.6	
	APR-SEP	5.2	8.8	11.2	100	13.6	17.2	11.2	
Twentymile Ck nr Adel	MAR-JUL	14.6	26	34	121	42	53	28	
	APR-SEP	7.0	15.4	21	121	27	35	17.4	

LAKE COUNTY AND GOOSE LAKE BASINS
Reservoir Storage (1000 AF) - End of February

LAKE COUNTY AND GOOSE LAKE BASINS
Watershed Snowpack Analysis - March 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
COTTONWOOD	8.7	7.9	4.0	3.8	Chewaucan River	6	119	84
DREWS	63.0	23.0	4.4	37.5	Deep Creek	1	110	92
					Drew Creek	4	111	78
					Honey Creek	1	110	92
					Silver Creek (Lake Co.)	5	112	97
					Twentymile Creek	1	110	92

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 base period.

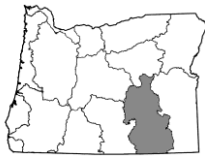
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

For more information contact your local Natural Resources Conservation Service Office:

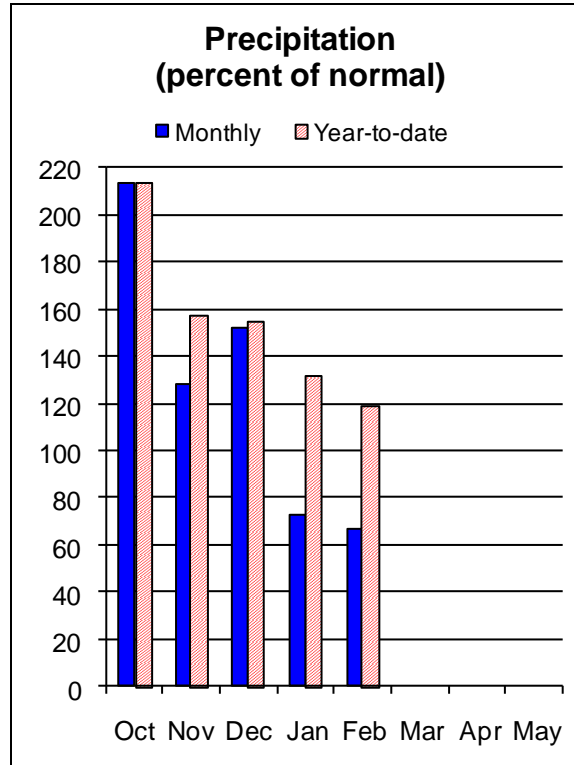
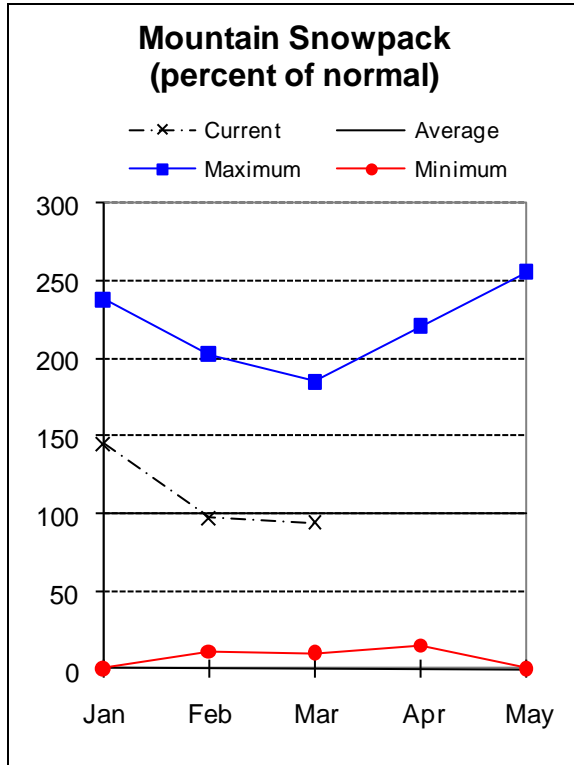
Lakeview - (541) 947-2202

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Harney Basin

March 1, 2011



Water Supply Outlook

On March 1, the snowpack in the Harney basin was 94 percent of average. Snow measurements were collected at 9 SNOTEL sites and 7 aerial markers in the basin this month. Monthly precipitation was below average for the second month in row in the Harney basin during February. Since the beginning of the water year, total precipitation has been 119 percent of average.

At this point in the season, summer streamflow forecasts for most points in the basin are above average. In particular, the April through September forecast for the Donner Und Blitzen River near Frenchglen and the Silvies River near Burns are both expected to be 111 percent of average. The forecast for Trout Creek near Denio is 115 percent of average for the same period. Water users in the Harney basin can anticipate above average water supplies during the summer of 2011.

For more information contact your local Natural Resources Conservation Service Office:

Hines - (541) 573-6446

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

HARNEY BASIN
Streamflow Forecasts - March 1, 2011

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	Chance Of Exceeding *						30-Yr Avg. (1000AF)
		90%	70%	50%		30%	10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Donner Und Blitzen R nr Frenchglen	MAR-JUL	55	72	83	111	94	111	75
	APR-SEP	51	67	78	111	89	105	70
Silvies R nr Burns	MAR-JUL	72	114	143	111	172	215	129
	APR-SEP	44	84	110	111	136	176	99
Trout Ck nr Denio	MAR-JUL	7.7	10.7	12.8	115	14.9	17.9	11.1
	APR-SEP	6.6	9.7	11.8	115	13.9	17.0	10.3

HARNEY BASIN
Reservoir Storage (1000 AF) - End of February

HARNEY BASIN
Watershed Snowpack Analysis - March 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Donner und Blitzen River	5	95	90
					Silver Creek (Harney Co.)	2	127	110
					Silvies River	6	97	94
					Trout Creek	6	102	110

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

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Hines - (541) 573-6446
Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

Recession Forecasts for Oregon

Recession flow forecasts are presented below for key streamflow sites where reliable daily streamflow data are available. The recession flow forecasts use exceedance probabilities in a format similar to the standard water supply forecasts presented in this document. Each forecast provides a range of possible outcomes representing the uncertainty of forecasting models.

The types of forecasts in the table below are:

- 1) Threshold flow -- Date that the daily streamflow rate falls below the given threshold flow
- 2) Peak flow -- Maximum daily flow
- 3) Date of peak flow -- Date of occurrence of maximum daily flow
- 4) Average daily flow on a given date

OWYHEE AND MALHEUR BASINS					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
Owyhee R nr Rome	2000 cfs	Mar 24	May 05	Jun 16	May 6
Owyhee R nr Rome	1000 cfs	Apr 03	May 16	Jun 28	May 18
Owyhee R nr Rome	500 cfs	Apr 21	Jun 02	Jul 14	Jun 2

UPPER JOHN DAY BASIN					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
John Day R at Service Creek	Average Daily Flow on Aug. 1st	131	355	580	271

UPPER DESCHUTES AND CROOKED BASINS					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
Crane Prairie Inflow *	Date of Peak	May 09*	May 25*	Jun 10*	May 25
Crane Prairie Inflow	Peak Flow	235	375	515	403
Crane Prairie Inflow	Average Daily Flow on Oct. 1st	197	245	295	269
Prineville Reservoir Inflow	113 cfs	May 13	Jun 05	Jun 28	June 3
Prineville Reservoir Inflow	75 cfs	May 18	Jun 11	Jul 05	June 11
Prineville Reservoir Inflow	50 cfs	May 24	Jun 18	Jul 13	June 19
Whychus Creek nr Sisters	100 cfs	Jul 23	Aug 16	Sep 11	August 16

*No prediction possible until April 1. Historic values are shown for reference prior to the April 1 report.

ROGUE AND UMPQUA BASINS					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
South Umpqua R nr Brockway *	90 cfs	Jul 23	Aug 10	Aug 27	August 8
South Umpqua R at Tiller	140 cfs	Jun 22	Jul 13	Aug 02	July 11
South Umpqua R at Tiller	90 cfs	Jul 12	Aug 03	Aug 27	August 1
South Umpqua R at Tiller	60 cfs	Aug 02	Aug 31	Sep 26	August 28

*Dates are based on streamflow data adjusted for releases from Galesville Reservoir to reflect natural flow conditions and do not match observed gage data. There is an approximately 20% chance in any given year that the flow will not recede below 90 cfs; the dates given here are for the event that the flow does recede below 90 cfs.

LAKE COUNTY AND GOOSE LAKE BASINS					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
Deep Ck ab Adel	100 cfs	May 27	Jun 18	Jul 10	June 17
Honey Ck nr Plush	100 cfs	Apr 14	May 17	Jun 19	May 16
Honey Ck nr Plush	50 cfs	May 02	Jun 01	Jul 01	June 4
Twentymile Ck nr Adel	50 cfs	May 02	May 28	Jun 23	May 30
Twentymile Ck nr Adel	10 cfs	Jun 15	Jul 08	Aug 02	July 20

HARNEY BASIN					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
Silvies R nr Burns	400 cfs	Apr 22	May 21	Jun 19	May 21
	200 cfs	May 09	Jun 07	Jul 06	June 2
	100 cfs	May 22	Jun 23	Jul 23	June 13
	50 cfs	Jun 12	Jul 17	Aug 22	July 3
Donner Und Blitzen R nr Frenchglen	200 cfs	May 19	Jun 10	Jul 02	June 20
Donner Und Blitzen R nr Frenchglen	100 cfs	Jun 10	Jun 30	Jul 18	July 9

Summary of Snow Course Data

March 2011

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon						
ALTHOUSE #2	4530	2/28/11	---	5.4E	.0	4.7
ANEROID LAKE SNOTEL	7400	3/01/11	61	14.1	12.2	21.0
ANNIE SPRING SNOTEL	6010	3/01/11	92	32.4	27.4	33.5
ANTHONY LAKE (REV)	7130	2/28/11	61	19.2	16.0	--
ARBUCKLE MTN SNOTEL	5770	3/01/11	55	13.9	13.2	18.5
BARNEY CREEK (NEW)	5840	3/01/11	32	9.1	8.9	--
BEAR FLAT MEADOW AM	5900	3/01/11	23	7.1	--	11.1
BEAVER DAM CREEK	5100	3/01/11	32	11.7	7.6	11.4
BEAVER RES. SNOTEL	5150	3/01/11	30	7.9	6.7	8.6
BIG RED MTN SNOTEL	6050	3/01/11	68	20.5	18.7	22.5
BIGELOW CAMP SNOTEL	5130	3/01/11	46	13.6	4.9	12.7
BILLIE CK DVD SNOTEL	5280	3/01/11	51	18.7	12.9	21.4
BLAZED ALDER SNOTEL	3650	3/01/11	96	24.9	9.4	30.1
BLUE MTN SPGS SNOTEL	5870	3/01/11	47	14.2	12.8	15.7
BOULDER CREEK AM	5690	3/01/11	8	2.6	5.0	3.8
BOURNE SNOTEL	5850	3/01/11	37	10.3	12.2	16.6
BOWMAN SPRNGS SNOTEL	4530	3/01/11	26	7.2	4.4	9.1
BUCK PASTURE AM	5700	3/01/11	8	2.5	3.2	2.4
BUCKSKIN LAKE AM	5200	3/01/11	3	.9	.0	.5
BULLY CREEK AM	5300	3/01/11	6	1.8	5.6	2.2
CALIBAN ALT	6500	2/25/11	71	23.0	21.4	25.2
CALL MEADOWS AM	5340	3/01/11	10	3.2	7.4	4.2
CAMAS CREEK #3	5850	3/02/11	35	10.9	9.9	11.9
CASCADE SUM. SNOTEL	5100	3/01/11	93	35.8	19.4	27.2
CHEMULT ALT SNOTEL	4850	3/01/11	29	9.0	5.8	8.1
CLACKAMAS LK. SNOTEL	3400	3/01/11	46	8.5	4.0	12.3
CLEAR LAKE SNOTEL	3810	3/01/11	46	8.1	3.0	13.2
COLD SPRINGS SNOTEL	5940	3/01/11	65	24.3	18.2	27.0
COUNTY LINE SNOTEL	4830	3/01/11	13	2.6	1.9	4.6
COX FLAT AM	5750	3/01/11	20	6.2	--	7.1
CRAZYMEN FLAT AM	6100	3/01/11	9	2.8	--	9.1
CRAZYMEN FLAT SNOTEL	6180	3/01/11	42	13.0	11.6	15.7
DALY LAKE SNOTEL	3690	3/01/11	44	8.6	.0	15.0
DEADHORSE GRADE	3700	3/01/11	26	6.2	.0	8.5
DEADWOOD JUNCTION	4600	3/01/11	21	6.7	5.0	6.9
DERR	5670	2/28/11	28	8.7	9.2	9.7
DERR SNOTEL	5850	3/01/11	42	12.6	12.0	13.7
DIAMOND LAKE SNOTEL	5280	3/01/11	38	13.5	8.4	15.0
DOG HOLLOW AM	4900	3/01/11	7	1.8	--	1.0
DOOLEY MOUNTAIN	5430	3/01/11	31	8.8	11.2	7.9
EAST EAGLE	4400	3/01/11	58	18.9	9.1	23.3
EILERTSON SNOTEL	5510	3/01/11	29	9.6	9.0	9.6
ELDORADO PASS	4600	3/01/11	17	5.6	6.2	3.4
EMIGRANT SPGS SNOTEL	3800	3/01/11	26	7.2	2.3	5.7
FINLEY CORRALS AM	6000	3/01/11	42	13.0	--	14.8
FISH CREEK SNOTEL	7660	3/01/11	74	26.5	20.7	23.9
FISH LK. SNOTEL	4660	3/01/11	35	9.1	4.9	11.1
FLAG PRAIRIE AM	4750	3/01/11	19	6.1	6.8	4.5
FOURMILE LAKE SNOTEL	5970	3/01/11	57	18.9	15.8	27.1
GERBER RES SNOTEL	4890	3/01/11	6	1.5	.0	1.4
GOLD CENTER SNOTEL	5410	3/01/11	25	8.4	8.3	10.3
GOVT CORRALS AM	7450	3/01/11	42	13.4	12.4	--
GRAYBACK PEAK	6000	3/01/11	68	21.3	16.3	17.2
GREENPOINT SNOTEL	3310	3/01/11	56	9.9	8.7	17.8
HIGH PRAIRIE	6100	2/28/11	86	27.7	32.6	41.1
HIGH RIDGE SNOTEL	4920	3/01/11	75	21.8	15.3	21.2
HOGG PASS SNOTEL	4790	3/01/11	67	18.3	16.1	34.0
HOLLAND MDWS SNOTEL	4930	3/01/11	54	14.7	3.4	21.0

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon (continued)						
HOWARD PRAIRIE	4500	3/01/11	19	5.8	3.3	7.3
HUNGRY FLAT	4400	2/25/11	12	2.2	.2	3.4
IRISH-TAYLOR SNOTEL	5540	3/01/11	89	26.5	20.4	30.7
JUMP OFF JOE SNOTEL	3520	3/01/11	53	12.4	.0	11.4
KING MTN #1	4500	2/28/11	37	9.3	1.8	6.7
KING MTN #2 SNOTEL	4340	3/01/11	27	6.5	.0	3.8
KING MTN #3	3650	2/28/11	20	4.2	.0	1.0
KING MTN #4	3050	2/28/11	7	1.0	.0	.1
LAKE CK R.S. SNOTEL	5240	3/01/11	33	8.3	9.5	11.6
LITTLE ALPS	6200	2/28/11	38	10.3	7.6	11.1
LITTLE ANTONE (ALT)	5000	2/28/11	26	7.3	8.0	8.4
LITTLE MEADOW SNOTEL	4020	3/01/11	93	27.3	8.5	22.8
LOOKOUT BUTTE AM	5650	3/01/11	4	1.3	.0	.3
LOUSE CANYON AM	6440	3/01/11	26	8.3	6.5	5.8
LUCKY STRIKE SNOTEL	4970	3/01/11	30	9.5	5.7	9.3
MADISON BUTTE SNOTEL	5150	3/01/11	19	5.2	4.1	4.8
MARION FORKS SNOTEL	2590	3/01/11	23	5.5	.0	10.2
MARKS CREEK	4540	2/25/11	13	3.6	1.8	3.2
MARY'S PEAK REV	3620	2/25/11	34	6.4	.0	5.8
MCKENZIE SNOTEL	4770	3/01/11	105	36.7	19.7	37.5
MEACHAM	4300	3/02/11	24	7.2	8.0	8.5
MILL CREEK MDW	4400	2/28/11	36	8.7	6.4	10.6
MILLER WOODS SNOTEL	420	3/01/11	0	.0	.0	--
MOSS SPRINGS SNOTEL	5760	3/01/11	66	20.1	17.0	22.2
MT ASHLAND SWBK.	6400	2/25/11	65	21.3	21.2	27.2
MT HOOD	5370	3/01/11	141	43.7E	35.5	53.9
MT HOOD TEST SNOTEL	5370	3/01/11	129	40.1	32.4	48.4
MT HOWARD SNOTEL	7910	3/01/11	37	11.6	11.3	12.8
MUD RIDGE SNOTEL	4070	3/01/11	81	18.7	13.6	21.9
NEW CRESCENT SNOTEL	4910	3/01/11	44	11.4	8.4	11.0
NEW DUTCHMAN #3	6320	2/25/11	120	38.9	29.9	46.1
NORTH FK RES SNOTEL	3060	3/01/11	78	18.1	2.4	16.4
NORTH UMPQUA	4220	3/01/11	28	9.0	1.5	10.7
OCHOCO MEADOWS	5200	2/25/11	33	9.5	10.9	9.6
OCHOCO MEADOW SNOTEL	5430	3/01/11	28	9.6	14.1	9.3
OREGON CANYON AM	6950	3/01/11	17	5.4	7.8	5.5
PARK H.Q. REV	6550	2/28/11	121	45.4	34.6	48.0
PATTON MEADOWS AM	6800	3/01/11	36	11.1	--	15.1
PEAVINE RIDGE SNOTEL	3420	3/01/11	47	10.6	2.8	13.2
PUEBLO SUMMIT AM	6800	3/01/11	17	5.4	5.9	2.5
QUARTZ MTN SNOTEL	5720	3/01/11	7	1.4	.8	2.3
R.R. OVERPASS SNOTEL	2680	3/01/11	9	3.0	.0	.1
RED BUTTE #1	4560	2/23/11	46	12.2	.7	10.2
RED BUTTE #2	4000	2/23/11	17	2.8	.0	5.3
RED BUTTE #3	3500	2/23/11	19	3.5	.0	2.3
RED BUTTE #4	3000	2/23/11	8	1.5	.0	.8
RED HILL SNOTEL	4410	3/01/11	110	38.6	26.1	41.4
ROARING RIVER SNOTEL	4950	3/01/11	74	25.6	12.1	25.5
ROCK SPRINGS SNOTEL	5290	3/01/11	19	6.1	7.7	5.3
SADDLE MTN SNOTEL	3110	3/01/11	79	21.4	.0	6.2
SALT CK FALLS SNOTEL	4220	3/01/11	66	22.4	2.7	16.5
SANTIAM JCT. SNOTEL	3740	3/01/11	57	14.5	.0	17.8
SCHNEIDER MDW SNOTEL	5400	3/01/11	75	22.4	22.7	27.6
SEINE CREEK SNOTEL	2060	3/01/11	21	4.1	.1	2.9
SEVENMILE MARSH SNTL	5700	3/01/11	69	21.9	18.3	26.7
SILVER BURN	3720	2/28/11	43	13.6	4.5	10.5
SILVER CREEK SNOTEL	5740	3/01/11	33	11.1	11.7	9.8
SILVIES SNOTEL	6990	3/01/11	43	4.8	12.2	15.6
SISKIYOU SUMMIT REV	4630	2/25/11	19	6.1	4.1	5.3
SKI BOWL ROAD	6000	2/25/11	52	17.5	18.0	22.0
SNOW MTN SNOTEL	6220	3/01/11	33	10.1	7.6	10.3
SF BULL RUN SNOTEL	2690	3/01/11	52	8.6	.0	2.8
STARR RIDGE SNOTEL	5250	3/01/11	24	7.8	6.5	6.0
STRAWBERRY SNOTEL	5770	3/01/11	15	4.7	4.7	5.5
SUMMER RIM SNOTEL	7080	3/01/11	48	14.8	12.1	15.2

SNOW COURSE		ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon (continued)							
SUMMIT LAKE	SNOTEL	5610	3/01/11	88	29.8	21.4	31.5
SUN PASS	SNOTEL	5400	3/01/11	47	15.2	18.1	--
SWAN LAKE MTN	SNOTEL	6830	3/01/11	56	18.7	17.9	--
SYCAN FLAT	AM	5500	3/01/11	13	4.4	--	5.5
TANGENT		5400	2/25/11	50	15.0	16.0	19.9
TAYLOR BUTTE	SNOTEL	5030	3/01/11	23	7.4	5.8	6.0
TAYLOR GREEN	SNOTEL	5740	3/01/11	53	18.3	16.8	18.9
THREE CK MEAD	SNOTEL	5690	3/01/11	64	19.1	13.5	16.9
TIMOTHY LAKE		3300	2/25/11	18	4.1E	--	10.4
TIPTON	SNOTEL	5150	3/01/11	34	10.9	10.4	12.8
TOKETEE AIRSTRIP SN		3240	3/01/11	12	3.7	.0	5.8
TOLLGATE		5070	3/02/11	82	24.0	17.6	24.5
TRAP CREEK		3800	3/01/11	34	10.2	.0	9.1
TROUT CREEK	AM	7800	3/01/11	34	10.9	12.4	9.7
V LAKE	AM	6600	3/01/11	28	10.1	10.9	7.3
WOLF CREEK	SNOTEL	5630	3/01/11	50	12.7	11.2	14.7
California							
ADIN MOUNTAIN		6350	2/28/11	43	12.7	10.2	11.7
ADIN MTN SNOTEL		6190	3/01/11	42	13.2	11.6	12.2
CEDAR PASS SNOTEL		7030	3/01/11	48	15.4	12.7	15.6
CROWDER FLAT AM		5200	3/01/11	7	2.5E	--	2.3
CROWDER FLAT SNOTEL		5170	3/01/11	14	5.0	4.7	4.7
DISMAL SWAMP SNOTEL		7360	3/01/11	79	26.5	18.6	23.7
STATE LINE	AM	5750	3/01/11	8	2.5	--	6.8
Idaho							
BATTLE CREEK	AM	5720	3/01/11	19	5.9	5.2	3.9
BULL BASIN	AM	5460	3/01/11	5	1.6	3.5	1.6
MUD FLAT	SNOTEL	5730	3/01/11	32	8.6	8.2	6.8
RED CANYON	AM	6650	3/01/11	29	9.0	11.5	7.3
SOUTH MTN	SNOTEL	6500	3/01/11	39	13.2	14.0	17.1
SUCCOR CREEK	AM	6100	3/01/11	28	8.7	--	7.4
VAUGHT RANCH	AM	5830	3/01/11	16	5.0	5.8	4.7
Nevada							
BEAR CREEK SNOTEL		7800	3/01/11	68	18.8	8.4	17.1
BIG BEND SNOTEL		6700	3/01/11	33	9.4	7.2	8.6
BUCKSKIN, L SNOTEL		6700	3/01/11	39	9.5	7.6	8.5
COLUMBIA BASIN	AM	6650	2/23/11	21	6.1	10.6	8.8
DISASTER PEAK SNOTEL		6500	3/01/11	20	6.4	6.6	9.7
FAWN CREEK SNOTEL		7050	3/01/11	50	13.2	11.6	14.4
FRY CANYON		6700	2/23/11	22	7.4	8.0	7.3
GOLD CREEK		6600	2/23/11	21	6.2	6.4	5.6
GRANITE PEAK SNOTEL		7800	3/01/11	66	19.6	10.7	19.7
JACK CREEK, U SNOTEL		7280	3/01/11	50	11.7	10.7	15.7
LAMANCE CREEK SNOTEL		6000	3/01/11	30	8.5	8.5	12.6
LAUREL DRAW SNOTEL		6700	3/01/11	30	8.6	8.9	9.2
MERRIT MOUNTAIN	AM	7000	2/23/11	16	4.6	10.5	6.6
MIDAS	(d)	7200	2/23/11	12	3.5	4.9	3.7
QUINN RIDGE	AM	6300	3/01/11	13	4.2	.0	2.1
SEVENTYSIX CK SNOTEL		7100	3/01/11	35	8.3	7.0	10.9
STAG MOUNTAIN	AM	7700	2/23/11	18	5.2	3.0	5.3
TAYLOR CANYON SNOTEL		6200	3/01/11	19	5.1	4.1	5.3
TOE JAM AM	AM	7700	2/23/11	27	7.8	6.5	9.4
TREMEWAN RANCH		5700	2/23/11	0	.0	3.1	1.9

(d) denotes discontinued site.

Basin Outlook Reports; How Forecasts Are Made

And Federal – State – Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

**USDA, Natural Resources Conservation Service
Snow Survey Office
1201 NE Lloyd; Suite 900
Portland, OR 97232**

Phone: (503) 414-3270

Web site: <http://www.or.nrcs.usda.gov/snow/index.html>

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

Interpreting Water Supply Forecasts

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflow forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

90 Percent Chance of Exceedance Forecast. There is a 90 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 10 percent chance that the actual streamflow volume will be less than this forecast value.

70 Percent Chance of Exceedance Forecast. There is a 70 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 30 percent chance that the actual streamflow volume will be less than this forecast value.

50 Percent Chance of Exceedance Forecast. There is a 50 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 50 percent chance that the actual streamflow volume will be less than this forecast value. Generally, this forecast is the middle of the range of possible streamflow volumes that can be produced given current conditions.

30 Percent Chance of Exceedance Forecast. There is a 30 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 70 percent chance that the actual streamflow volume will be less than this forecast value.

10 Percent Chance of Exceedance Forecast. There is a 10 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 90 percent chance that the actual streamflow volume will be less than this forecast value.

*Note: There is still a 20 percent chance that actual streamflow volumes will fall either below the 90 percent exceedance forecast or above the 10 percent exceedance forecast.

These forecasts represent the uncertainty inherent in making streamflow predictions. This uncertainty may include sources such as: unknown future weather conditions, uncertainties associated with the various prediction methodologies, and the spatial coverage of the data network in a given basin.

30-Year Average. The 30-year average streamflow for each forecast period is provided for comparison. The average is based on data from 1971-2000. The % AVG. column compares the 50% chance of exceedance forecast to the 30-year average streamflow; values above 100% denote when the 50% chance of exceedance forecast would be greater than the 30-year average streamflow.

AF - Acre-feet, forecasted volume of water are typically in thousands of acre-feet.

These forecasts are given to users to help make risk-based decisions. Users can select the forecast corresponding to the level of risk they are willing to accept in order to minimize the negative impacts of having more or less water than planned for.

To Decrease the Chance of Having Less Water than Planned for: A user might determine that making decisions based on a 50 percent chance of exceedance forecast is too much risk to take (there is still a 50% chance that the user will receive less than this amount). To reduce the risk of having less water than planned for, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded such as the 90 or 70 percent exceedance forecasts.

To Decrease the Chance of Having More Water than Planned for: A user might determine that making decisions based on a 50 percent chance of exceedance forecast is too much risk to take (there is still a 50% chance that the user will receive more than this amount). To reduce the risk of having more water than planned for, users can base their operational decisions on one of the forecasts with a lesser chance of being exceeded such as the 30 or 10 percent exceedance forecasts.

Using the forecasts - an Example

Using the 50 Percent Exceedance Forecast. Using the example forecasts shown below, there is a 50% chance that actual streamflow volume at the Boise River near Twin Springs will be less than 685 KAF between April 1 and July 31. There is also a 50% chance that actual streamflow volume will be greater than 685 KAF.

Using the 90 and 70 Percent Exceedance Forecasts. If an unexpected shortage of water could cause problems (such as irrigated agriculture), users might want to plan on receiving 610 KAF (from the 70 percent exceedance forecast). There is a 30% chance of receiving *less* than 610 KAF.

Alternatively, if users determine the risk of using the 70 percent exceedance forecast is too great, then they might plan on receiving 443 KAF (from the **90**

percent exceedance forecast). There is 10% chance of receiving less than 443 KAF.

Using the 30 or 10 Percent Exceedance Forecasts. If an unexpected excess of water could cause problems (such as operating a flood control reservoir), users might plan on receiving 760 KAF (from the 30 percent exceedance forecast). There is a 30% chance of receiving *more* than 760 KAF.

Alternatively, if users determine the risk of using the 30 percent exceedance forecast is too great, then they might plan on receiving 927 KAF (from the 10 percent exceedance forecast). There is a 10% chance of receiving more than 927 KAF.

Users could also choose a volume in between any of these values to reflect their desired risk level.

OWYHEE AND MALHEUR BASINS Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>							
		Chance Of Exceeding *							
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)	
MALHEUR near Drewsey	FEB-JUL	148	184	210	165	238	282	127	
	APR-SEP	87	110	128	168	147	177	76	
NF MALHEUR at Beulah	FEB-JUL	108	127	141	157	156	178	90	
	APR-SEP	341	473	575	134	687	869	430	
OWYHEE RESV INFLOW (2)	FEB-JUL	602	792	935	134	1090	1340	700	
	APR-SEP	341	473	575	134	687	869	430	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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Official Business



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<http://www.or.nrcs.usda.gov/snow/watersupply/>

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